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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/486,625	09/13/2000	Velpandi Ayyavoo	UPAP-0287	8820
34137	7590	02/23/2006	EXAMINER	
COZEN O'CONNOR, P.C. 1900 MARKET STREET PHILADELPHIA, PA 19103-3508			PENG, BO	
			ART UNIT	PAPER NUMBER
			1648	
DATE MAILED: 02/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/486,625	Applicant(s) AYYAVOO ET AL.	
	Examiner Bo Peng	Art Unit 1648	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5,7-11 and 18-34 is/are pending in the application.
- 4a) Of the above claim(s) 21,24,28 and 32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5,20,23,26,27,30,31 and 34 is/are allowed.
- 6) ☒ Claim(s) 3,4,7-11,18,19,22,25,29 and 33 is/are rejected.
- 7) ☐ Claim(s) 4,5,9,11,19,20,22,23,25-27,29-31,33 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/22/2001</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The examiner of your application in the Patent and Trademark Office has been changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Bo Peng, Art Unit 1648.
2. Upon a review of the prosecution history in this application, the Office has determined that it is necessary to vacate the previous Office action. In order for examination to further proceed expeditiously and with high quality, the Office has determined to make this action NON-FINAL. The Office regrets any inconvenience this may cause Applicant.
3. Primary Examiner Stucker has contacted Applicant a number of times through his secretary to arrange a telephone interview, but has failed to reach Applicant. Therefore a non-final Office action is set forth as below.
4. This Office Action is in response to the reply filed on May 27, 2005. Claims 3-5, 7-11 and 18-34 are pending. Claims 4, 5, 9, 11 and 19-34 are amended. Claims 21, 24, 28 and 32 are withdrawn from consideration as being directed to a nonelected invention, since Applicant elected SEQ ID NO:27 in original claim 5 (See restriction Groups 21-40, and also see Applicant's reply to restriction requirement filed on October 30, 2003). Claims 3-5, 7-11, 18-20, 22, 23, 25-27, 29-31, 33 and 34 are examined in the instant Office action.
5. According to restriction/election, sequence research has been carried out on SEQ ID NO: 27. Since SEQ ID NO: 27 appears to be free of prior art, the sequence search is extended to SEQ ID NOs: 4, 9, 10, 32 and 33.

Specification

6. Applicant is required to update the status (pending, allowed, etc.) of all parent priority applications in the first line of the specification. The status of all citations of US filed applications in the specification should also be updated where appropriate.

Information Disclosure Statement

7. The information disclosure statement submitted on January 22, 2001 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. An initialed and dated copy of Applicant's IDS form 1449 is attached to the instant Office action.

Claim Objections

8. Claims 4, 5, 9, 11, 19, 20, 22, 23, 25-27, 29-31, 33 and 34 are objected for following reason: Claims 4, 9, 11, 19, 22, 25, 29 and 33 are objected to under 37 CFR 1.75 as being substantial duplicates of claims 5, 20, 23, 26, 27, 30, 31 and 34. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). In the instant case, Claims 4, 9, 11, 19, 22, 25, 29 and 33 are directed to vif protein variants of SEQ ID NOs: 4, 9, and 10, whose nucleic acid sequence and recombinant expression vectors are SEQ ID NOs 27,

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32 and 33 that are encompassed in claims 5, 20, 23, 26, 27, 30, 31 and 34. Appropriate corrections are required.

9. It is noted that the form of “vif protein” is constantly used in the claims. However, the corrected forms should be “vif protein” when you refer to a protein and “vif” when you refer to a gene. Appropriate corrections are required.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “attenuated” in claims 22, 23, 33 and 34 is used by the claim to describe the function of a vif protein, while the accepted meaning in biology is “less virulent bacteria or viruses.” The term is indefinite because the specification does not clearly define the term.

Claim Rejections - 35 USC § 112

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which

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it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 3, 7, 8 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

14. Claims 3, 7, 8 and 18 are drawn to an isolated nucleic acid molecule encoding a mutated vif protein containing an Arginine in place of Poline at position 162 of SEQ ID NO: 1. However, there is no basis to support such a mutation in the specification. Applicant is required to cancel the New Matter in the response to this Office Action. Alternatively, Applicant is invited to clearly point out the written support for the instant limitations.

15. Claims 22, 33 and 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

16. Claims 22 and 33 are directed to nucleic acid molecules and plasmids comprising nucleotide sequences encoding an attenuated, non-functional vif protein, wherein said nucleic acid molecules comprise nucleotides sequences which encode an amino acid sequence selected from the group consisting of SEQ ID NO: 4, SEQ ID NO: 9, and SEQ ID: 10.

17. In the specification, Applicant has only disclosed specific nucleic acid sequences of SEQ

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ID NO: 27, 32 and 33 which encode specific vif protein variants of SEQ ID NO: 4, SEQ ID NO: 9, and SEQ ID: 10, respectively, but Applicant has not disclosed a sufficient number of species of all nucleic acids comprising nucleotide sequences which encode SEQ ID NO: 4, 9, and 10. Consequently, there is no indication that Applicant was in possession of all nucleic acid molecules that encode SEQ ID NO: 4, 9, and 10. This rejection affects dependent claims 4, 9, 11, 19, 25 and 29.

Remarks


18. Claims 5, 20, 23, 26, 27, 30, 31 and 34 are allowable. The Examiner is not aware of any suggestion in the prior art of record that that would point the artisan to the claimed mutated HIV vif protein of SEQ ID No: 4, 9, 10, 27, 32 and 33.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bo Peng, Ph.D. whose telephone number is 571-272-5542. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Housel can be reached on 571-272-0902. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Bo Peng, Ph.D.


JEFFREY STUCKER
PRIMARY EXAMINER